

Title (en)
HYDROFLUOROOLEFINS AND METHODS OF USING SAME

Title (de)
HYDROFLUOROLEFINE UND VERFAHREN ZUR VERWENDUNG DAVON

Title (fr)
HYDROFLUOROLÉFINES ET PROCÉDÉS D'UTILISATION ASSOCIÉS

Publication
EP 3558915 A4 20200729 (EN)

Application
EP 17883723 A 20171219

Priority
• US 201662437183 P 20161221
• IB 2017058133 W 20171219

Abstract (en)
[origin: WO2018116159A1] A hydro hydrofluoroolefin compound represented by the following general formula (I): (I) Rf1 and Rf2, and Rf3 and Rf4, are (i) independently, linear or branched fluorinated alkyl groups having 1-8 carbon atoms and optionally contain at least one catenated heteroatom selected from O or N; or (ii) are bonded together to form a ring structure having 4-8 carbon atoms and optionally contain one or more catenated heteroatoms selected from O or N. X is CF3, H, or F; and Z is F or H.

IPC 8 full level
C07D 265/30 (2006.01); **C07D 413/06** (2006.01); **C09K 5/10** (2006.01)

CPC (source: EP US)
C07D 265/30 (2013.01 - EP); **C07D 413/06** (2013.01 - EP US); **C09K 5/04** (2013.01 - EP); **C09K 5/10** (2013.01 - EP); **H01L 23/473** (2013.01 - US)

Citation (search report)

- [X] US 4536490 A 19850820 - REGELMAN DALE F [US]
- [X] COY, D.H. ET AL.: "Polyfluoroalkyl compounds of silicon. Part X. Further silanes containing the bis(trifluoromethyl)amino-group", JOURNAL OF THE CHEMICAL SOCIETY, DALTON TRANSACTIONS, no. 17, 1974, pages 1852 - 1855, XP055705776, ISSN: 0300-9246, DOI: 10.1039/dt9740001852
- [X] ALEXANDER, E.S. ET AL.: "Polyfluoroalkyl derivatives of nitrogen. Part XXVII. Some reactions of NN-bistrifluoromethylvinylamine", JOURNAL OF THE CHEMICAL SOCIETY, SECTION C: ORGANIC CHEMISTRY, >6015C, 1968, pages 796 - 801, XP055705779, ISSN: 0022-4952, DOI: 10.1039/j39680000796
- [X] PETROV, A.R. ET AL.: "A Novel Synthetic Approach to Diaminoacetylenes: Structural Characterization and Reactivity of Aromatic and Aliphatic Ynediamines", CHEMISTRY - A EUROPEAN JOURNAL, vol. 16, no. 39, 2010, pages 11804 - 11808, XP055706008, ISSN: 0947-6539, DOI: 10.1002/chem.201002211
- [X] GRADL, S.N. ET AL.: "A Practical Variant of the Claisen-Eschenmoser Rearrangement: Synthesis of Unsaturated Morpholine Amides", SYNLETT, vol. 2002, no. 03, 2002, pages 0411 - 0414, XP055706019, ISSN: 0936-5214, DOI: 10.1055/s-2002-20453
- [X] YAMANAKA, H. ET AL.: "A Convenient Method for the Synthesis of [alpha]-Imidostyrenes from Styrenes and Imides via Diphenylstyrylsulfonium Salts", CHEMISTRY LETTERS, vol. 32, no. 12, 2003, pages 1192 - 1193, XP055706027, ISSN: 0366-7022, DOI: 10.1246/cl.2003.1192
- [X] OPITZ, G. ET AL.: "4-Dialkylamino-cumaline aus Ketenaminalen und Keten", CHEMISCHE BERICHTE, vol. 97, no. 5, 1964, pages 1266 - 1274, XP055706036, ISSN: 0009-2940, DOI: 10.1002/cber.19640970509
- [X] SCHÄRER, J.-C. ET AL.: "The Synthesis and Protonation of 1,1-Di(1-pyrrolyl)alkenes", HELVETICA CHIMICA ACTA, vol. 68, no. 8, 1985, pages 2282 - 2286, XP055706045, ISSN: 0018-019X, DOI: 10.1002/hlca.19850680823
- [X] RAJAGOPALAN, P. ET AL.: "Dipolar addition reactions of nitrileoxides. IV. The cycloaddition of nitrileoxides to ketene amins.", TETRAHEDRON LETTERS, vol. 7, no. 38, 1966, pages 4537 - 4539, XP055706042, ISSN: 0040-4039, DOI: 10.1016/S0040-4039(00)70073-6
- See references of WO 2018116159A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2018116159 A1 20180628; CN 110088071 A 20190802; EP 3558915 A1 20191030; EP 3558915 A4 20200729; JP 2020503307 A 20200130; JP 7120713 B2 20220817; TW 201835056 A 20181001; TW I756328 B 20220301; US 11046677 B2 20210629; US 2019337933 A1 20191107

DOCDB simple family (application)
IB 2017058133 W 20171219; CN 201780078817 A 20171219; EP 17883723 A 20171219; JP 2019533323 A 20171219; TW 106144738 A 20171220; US 201716470569 A 20171219